

WHAT IS CLAIMED IS:

1. An electrochemical energy storage device, comprising:
a positive electrode provided with a positive electrode collector and positive electrode active material which is held by the positive electrode collector and can occlude/emit a metal ion;

a negative electrode provided with a negative electrode collector and negative electrode active material which is held by the negative electrode collector and which can occlude/emit the metal ion;

a minutely porous separator held between the positive electrode and the negative electrode; and

an organic electrolyte, wherein:

a range of operating voltage is equivalent to a range from below 2 V to 4 V or more.

2. An electrochemical energy storage device according to Claim 1, wherein:

the operating voltage ranges from 0 V to 4.2 V.

3. An electrochemical energy storage device according to Claim 1, wherein:

the positive electrode collector and the negative electrode collector are made of material including carbonaceous material.

4. An electrochemical energy storage device, comprising:
a positive electrode provided with a positive electrode collector made of carbonaceous material and positive electrode active material which is held by the positive electrode collector and can occlude/emit a metal ion;

a negative electrode provided with a negative electrode collector made of carbonaceous material and negative electrode

active material which is held by the negative electrode collector and can occlude/emit a metal ion;

a minutely porous separator held between the positive electrode and the negative electrode; and

an organic electrolyte.

5. An electrochemical energy storage device according to Claim 4, wherein:

either of the positive electrode collector or the negative electrode collector or both is/are made of a carbon fiber.

6. An electrochemical energy storage device according to Claim 5, wherein:

the carbon fiber is woven cloth.

7. An electrochemical energy storage device according to Claim 6, wherein:

the positive electrode active material or the negative electrode active material is applied to the carbon fiber.

8. An electrochemical energy storage device according to Claim 4, wherein:

either or both of the positive electrode collector or/and the positive electrode active material and either or both of the negative electrode collector or/and the negative electrode active material are held on metallic foil.

9. An electrochemical energy storage device according to Claim 4, wherein:

either or both of the positive electrode collector or/and the positive electrode active material and either or both of the negative electrode collector or/and the negative electrode active material are held on a plastic sheet.

10. An electrochemical energy storage device according to Claim 4, wherein:

either or both of the positive electrode collector or/and the positive electrode active material and either or both of the negative electrode collector or/and the negative electrode active material are held on a metallized plastic sheet.

11. An electrochemical energy storage device according to Claim 4, wherein:

a lithium salt is dissolved in the organic electrolyte.